

# Claims

[c1] What is claimed is:

1.A welding-type power source controller comprising:  
an input configured to receive feedback of a remote control process of a welding-type process; and  
a processor configured to receive the feedback and override the remote control process if a control irregularity is detected.

[c2] 2.The controller of claim 1 wherein the processor is configured to monitor the feedback to detect a rate of change in control commands for the remote control process indicative of an irregularity.

[c3] 3.The controller of claim 2 wherein the rate of change in control commands indicative of an irregularity includes a rate of change indicative of at least one of a corrupt communication from the remote control, a disconnection of the remote control, and a communications failure from the remote control.

[c4] 4.The controller of claim 2 wherein the processor is further configured to compare the rate of change of the control commands to a threshold to determine whether

the rate of change exceeds a tolerance.

- [c5] 5.The controller of claim 1 wherein the remote control process includes a remote control in communication with a welding-type apparatus and the processor is further configured to notify an operator that the remote control is locked-out upon detecting an irregularity.
- [c6] 6.The controller of claim 1 wherein the processor is further configured to divert control of the welding-type process to a backup controller configured to control the welding-type process according to a last operator control input upon detection of an irregularity.
- [c7] 7.The controller of claim 6 wherein the processor is configured cause the backup controller to control the welding-type process until the welding-type process is discontinued.
- [c8] 8.The controller of claim 1 wherein the welding-type power source controller is configured to be incorporated into a welding-type power source.
- [c9] 9.The controller of claim 1 wherein the welding-type power source controller is configured to be incorporated into a portable welding-type device.
- [c10] 10.A method of controlling a welding-type process com-

prising:

remotely controlling a welding-type power source from a secondary control;

monitoring performance of the remote controlling; and  
redirecting control of the welding-type power source to a primary control upon detecting a performance abnormality.

[c11] 11.The method of claim 10 further comprising determining whether control commands sent from the remote control are indicative of a performance abnormality.

[c12] 12.The method of claim 10 further comprising disregarding input from the remote control, upon detecting a performance abnormality of the remote control.

[c13] 13.The method of claim 10 further comprising controlling the welding-type power source according to a previous user input upon detecting a performance abnormality.

[c14] 14.The method of claim 10 further comprising notifying a user of a remote control failure upon detecting a performance abnormality.

[c15] 15.The method of claim 10 further comprising locking-out the remote control upon detecting a performance abnormality.

- [c16] 16.The method of claim 15 further comprising removing the lockout only upon powering down the welding-type power source.
- [c17] 17.A welding-type apparatus comprising:  
a power source configured to deliver welding-type power to perform a welding-type process;  
a remote control configured to control an output of the welding-type power;  
a monitoring control configured to monitor the remote control; and  
a backup control configured to assume control of the welding-type process upon detection of a remote control malfunction.
- [c18] 18.The apparatus of claim 17 wherein detecting a remote control malfunction includes detecting commands from the remote control including a rate of change of the control commands that is at least one of greater than a maximum threshold and less than a minimum threshold.
- [c19] 19.The apparatus of claim 17 wherein the backup control is configured to control the output of the welding-type power source according to an operator constraint upon assuming control.
- [c20] 20.The apparatus of claim 19 wherein the backup control

is configured to control the welding-type power source according to the operator constraint until the welding-type process is discontinued.

- [c21] 21.The apparatus of claim 17 wherein the monitoring control is further configured to place the welding-type power source into a lockout mode upon detecting a remote control malfunction.
- [c22] 22.The apparatus of claim 21 wherein the monitoring control is further configured to hold the welding-type power source in the lockout mode until the welding-type power source is powered down.
- [c23] 23.The apparatus of claim 17 wherein the backup control is configured to be incorporated into the power source.
- [c24] 24.The apparatus of claim 17 wherein the welding-type power source is configured to deliver welding-type power for at least one of a metal inert gas (MIG) welding-type process, tungsten inert gas (TIG) welding-type process, a shielded metal arc welding (SMAW) welding-type process, an induction heating process, and a plasma-cutting process.
- [c25] 25.The apparatus of claim 17 wherein the backup control includes a primary control operating as a backup control.

[c26] 26.A welding-type apparatus comprising:  
remote means for controlling a welding-type apparatus;  
means for monitoring the remote means; and  
means for overriding the remote means upon detecting a  
control irregularity of the remote means.